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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/686,357	10/14/2003	Yoshimasa Funakawa	02197CD/HG	6706

1933 7590 09/18/2006

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EXAMINER	
SMITH, NICHOLAS A	

ART UNIT	PAPER NUMBER
1742	

DATE MAILED: 09/18/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/686,357	FUNAKAWA ET AL.	
	Examiner	Art Unit	
	Nicholas A. Smith	1742	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *4 August 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-3* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-3* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 8/4/2006 has been entered.

Status of Claims

Claims 1-3 remain for examination.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japanese patent 6-264185 (JP'185) cited by applicant in IDS dated October 14, 2003.

3. JP'185 in paragraph 22 on page 4 discloses a process of manufacturing a high strength hot rolled analogous steel alloy plate (equivalent to sheet) comprising the steps of hot rolling at 1150C (within the claimed hot rolling temperature range of Ar3 point or

higher) followed by coiling at 500 to 700C (encompassing claimed coiling temperature range of 550 to 700C), which would meet the claimed process steps.

4. Moreover, as shown in the English abstract, JP'185 process uses a steel alloy with constituents whose wt% ranges overlap those recited by the claims; such overlap in alloy wt% ranges establishes a prima facie case of obviousness because it would be obvious to one of ordinary skill in the art to select the claimed alloy wt% ranges over the broader disclosure of the prior ad since prior art teaches similar utility (components for a machine structure) and high strength properties, see MPEP 2144.05.

5. More specifically, prior art example D in Table 2 on page 3 meets the composition recited by claims 1 and 2, and closely meets the claimed equation having a value of 1.58 which is slightly outside the claimed range of 0.8 to 1.3. Moreover, example E closely meets the composition recited by claims 1 to 3, and meets the claimed equation having a value of 1.0879 within the claimed range of 0.8 to 1.3. Also prior art examples in the table on page 5 are processed in the same manner as recited by claims 1 to 3.

6. Since applicant has not demonstrated (e.g. by comparative test data) that the alloy or equation ranges recited by claims 1 to 3 are somehow critical and productive of new and unexpected results, the claims would not distinguish over prior art. Note that a method claim is not rendered patentably new by the use of a somewhat different but analogous material therein unless applicant can show that starting material in the conventional process yields an unpredictable result, see In re Durden, 226 USPQ359.

Response to Arguments

Applicant's arguments filed 8/4/2006 have been fully considered but they are not persuasive.

Applicant argues:

1. JP'185 differs from the instant application in terms of composition. There is a difference between compositions in claims 1 and 2 (by wt %, C<0.06, Mo: 0.05-0.6 and Ti: 0.02-0.10) and JP'185 (by wt %, C: 0.02-0.08, Mo: 0.2-1.0 and Ti: 0.02-0.20). There is a difference between JP'185 and claim 3 (by wt %, C: 0.06-0.15, Mo: 0.3-0.7, and Ti: 0.10-0.35).

2. Example D in JP'185 (table 2) gives a ratio of 1.58 for 0.8< (C/12)/[(Ti/48)+(Mo/96)] <1.3 and contains Cr.

3. Example E in JP'185 (table 2) satisfies the requirement of 0.8< (C/12)/[(Ti/48)+(Mo/96)] <1.3. However, it contains Ti = 0.143 wt%, more than the claimed range of 0.02-0.10 wt% Ti in claims 1 and 2. Example E also contains Cr.

4. JP'185 is silent about Mo precipitates. The instant application is principally free of a hard second phase, whereas JP'185 mentions "martensite at a volume fraction of 5 to 15%."

5. Steel E (0.047%C-0.01%Si-1.62%Mn-0.91%Cr-0.05%Mo-0.143%Ti) in Table 2 of JP'185 and Steel A (0.045%C-0.05%Si-1.67%Mn-0.056%Cr-0.20%Mo-0.085%Ti) in Table 1 of the instant specification have tensile strengths

of 716MPa and 820MPa, respectively, yielding unexpectedly good properties with a reduction in the amount added of additional components.

Examiner responds:

1. JP'185 has a steel alloy with constituents whose wt% ranges overlap those recited in the instant claims; such overlap in alloy wt% ranges establishes a prima facie case of obviousness because it would be obvious to one of ordinary skill in the art to select the claimed alloy wt% ranges over the broader disclosure of the prior art since prior art teaches similar utility (components for a machine structure) and high strength properties in the whole range. See MPEP 2144.05.

2-3. In addition, the prior art closely meet the relation $0.8< (C/12)/[(Ti/48)+(Mo/96)] <1.3$ (example D and example E). Since applicant has not demonstrated (e. g. by comparative test data) that the alloy or equation ranges recited by claims 1-3 are somehow critical and productive of new and unexpected results, then claims would not patentably distinguish over prior art. In regards to the presence of Cr in JP'185, including example D and example E, the language in claims 1-3 uses the transitional phrase "consisting essentially of" in the first step of the claimed method. In claims 1-3, applicant has burden to show the additional element Cr in the prior art would materially change the characteristics of applicant's invention (see MPEP 2111.03). In the absence of the factual evidence, the cited prior art still read on the claimed invention.

4. Unless the applicant can demonstrate (e.g. by comparative test data) that the microstructure characteristic for prior art compositions not in the claimed

composition ranges differ from the microstructure characteristic for prior art composition, the same microstructure characteristic would be expected since composition and process of making (JP'185, table on page 5) the steel alloy are closely met, and in absence of proof to the contrary.

5. A comparison of Steel E of table 2 in JP'185 and of Steel A of table 1 in instant specification is not sufficient to establish criticality of the instant claimed composition range in that, as applicant states, compositions of Cr, Mo and Ti are different. For instance, the applicant has not demonstrated that 0.10 wt% Ti as claimed (0.02 to 0.10 wt% Ti) has better properties in comparison with 0.11 wt% as disclosed in the prior art (of 0.02-0.20 wt% Ti). It is noted that in the prior art that 0.085 wt% Ti contains significantly different Cr content (0.056 wt%, Steel A, Table 1 in specification) in comparison with Cr content (0.91 wt% Cr, Steel E, Table 2 in JP'185).

Conclusion

This is a continuation of applicant's earlier Application No. 10/686,357. All claims are drawn to the same invention claimed in the earlier application and could have been finally rejected on the grounds and art of record in the next Office action if they had been entered in the earlier application. Accordingly, **THIS ACTION IS MADE FINAL** even though it is a first action in this case. See MPEP § 706.07(b). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no, however, event will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nicholas A. Smith whose telephone number is (571)-272-8760. The examiner can normally be reached on 8:30 AM to 5:00 PM, Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on (571)-272-1244. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ROY KING
SUPERVISORY PATENT EXAMINER
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